CLAIM AMENDMENTS

1. (Currently amended) A sensor package comprising:

> a vertical sensor circuit component comprising a first face, a second face, a bottom a)

edge, a top edge, two side edges, input/output (I/O) pads and at least one sensitive direction

wherein the I/O pads are arranged on the second face of the vertical sensor circuit component; and

b) a horizontal sensor circuit component comprising a top face, a printed circuit board

(PCB) mounting face, a vertical sensor circuit component interface edge, at least two or more other

edges, and at least one sensitive direction orthogonal to the sensitive directions of the vertical

sensor circuit component,

wherein the vertical sensor circuit component interface edge of the horizontal sensor circuit

component connectively supports the vertical sensor circuit component along the Z axis; and

wherein the first face comprises I/O pads for conductive connection to the horizontal sensor

circuit component.

2. (Allowed) The sensor package of claim 1 wherein the distance between the bottom edge and

the top edge of the vertical sensor circuit component is about 1.1mm.

3. (Allowed) The sensor package of claim 1 wherein the distance between the bottom edge and

the top edge of the vertical sensor circuit component is less than about 1.1mm.

(Allowed) The sensor package of claim 1 wherein the I/O pads on the vertical sensor circuit 4.

component are arranged in an array.

5. (Allowed) The sensor package of claim 1 wherein the I/O pads on the vertical sensor circuit

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component are compatible with a method selected from the group consisting of wire bonding, flip

chip, solder bumping, stud bumping, conductive epoxy, flexible interconnect bonding, and tape

automated bonding (TAB) techniques.

6. (Cancelled).

7. (Allowed) The vertical sensor circuit component of claim 1 wherein the I/O pads are

compatible with a method selected from the group consisting of wire bonding, flip chip, solder

bumping, stud bumping, conductive epoxy, flexible interconnect bonding, and tape automated

bonding (TAB) techniques.

8. (Allowed) The sensor package of claim 1 wherein the vertical sensor circuit component and

the horizontal sensor circuit component are solid state sensors.

9. (Allowed) The sensor package of claim 1 wherein the vertical sensor circuit component and

the horizontal sensor circuit component are magnetic sensors.

10. (Allowed) The sensor package of claim 1 wherein the vertical sensor circuit component and

the horizontal sensor circuit component are tilt sensors.

11. (Allowed) The sensor package of claim 1 wherein the vertical sensor circuit component

comprises a sensor and the horizontal sensor circuit component comprises a solid state chip with

the vertical sensor circuit component interface edge.

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12. (Currently amended) A sensor package comprising:

a vertical sensor circuit component comprising a first face, a second face, a bottom

edge, a top edge, two side edges, input/output (I/O) pads and at least one sensitive direction

wherein the I/O pads are arranged on the second face of the vertical sensor circuit component; and

a horizontal sensor circuit component comprising a top face, a printed circuit board

(PCB) mounting face, a vertical sensor circuit component interface edge, at least two or more other

edges, and at least one sensitive direction orthogonal to the sensitive directions of the vertical

sensor circuit component,

b)

wherein the vertical sensor circuit component interface edge of the horizontal sensor circuit

component connectively supports the vertical sensor circuit component along the Z axis; and

wherein the vertical sensor circuit component is conductively connected to the horizontal

sensor circuit component.

(Allowed) A method for mounting a vertical sensor circuit component with a first and second 13.

face, a bottom, a top and two side edges, and I/O pads arranged on the second face to a PCB

comprising:

b)

connecting the bottom edge of the vertical sensor circuit component to the PCB; and a)

connecting the first face of the vertical sensor circuit component to a vertical sensor

circuit component interface edge of one or more horizontal sensor circuit components comprising a

top face, a PCB mounting face, a vertical sensor circuit component interface edge, and at least two

other edges, wherein the horizontal sensor circuit component is connected to the PCB;

wherein the vertical sensor circuit component interface edge of the horizontal sensor circuit

component to which the vertical sensor circuit component is connected supports the vertical sensor

circuit component along the Z axis.

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14. (Allowed) The method of claim 13 wherein the vertical sensor circuit component is

conductively connected to the PCB by a method selected from the group consisting of wire bonding,

flip chip, solder bumping, stud bumping, conductive epoxy, flexible interconnect bonding, and tape

automated bonding (TAB) techniques.

15. (Allowed) The method of claim 14 wherein the vertical sensor circuit component is

conductively connected to the PCB by conductive epoxy, solder bumping or stud bumping

techniques.

(Allowed) The method of claim 13 wherein the vertical sensor circuit component and the one 16.

or more horizontal sensor components are diced wherein the edges are substantially perpendicular

to the faces.

17. (Allowed) A method for making a multi-axis magnetometer for measuring the magnetic field

intensity along at least two orthogonal axes comprising:

mounting one or more magnetic field sensing circuit components comprising a top a)

face, a PCB mounting face, a vertical magnetic sensor circuit component interface edge, and two or

more other edges, by their PCB mounting face to a PCB; and

b) mounting to the PCB a vertical magnetic sensor circuit component comprising a first

face, a second face, a bottom edge, a top edge, two side edges, input/output (I/O) pads and at least

one sensitive direction wherein the I/O pads are arranged on the second face of the vertical sensor

circuit component;

wherein the vertical magnetic sensor circuit component is attached to and supported by the

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at least one magnetic field sensing circuit component; and

wherein the vertical magnetic sensing circuit component is conductively connected to the

magnetic field sensing circuit component.

(Allowed) The method of claim 17 wherein the magnetic field sensing circuit component is 18.

one or more horizontal sensor circuit components.

(Allowed) The method of claim 17 wherein the magnetic field sensing circuit component is 19.

one or more horizontal, 1-dimensional sensor circuit components.

Claims 20-23 (cancelled).

(Allowed) The method of claim 17 wherein the conductive connection is formed with an 24.

adhesive.

(Allowed) The method of claim 24 wherein the adhesive is conductive epoxy. 25.

(Allowed) A multi-axis magnetometer for measuring the magnetic field intensity along at least 26.

two orthogonal axes produced according to the method of claim 17.

(Allowed) The multi-axis magnetometer for measuring the magnetic field intensity along three 27.

orthogonal axes of claim 26, further comprising a tilt sensor.

(Allowed) The multi-axis magnetometer for measuring the magnetic field intensity along three 28.

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orthogonal axes of claim 26 wherein the vertical magnetic sensor circuit component is about 1.1 mm

in height above the PCB.

(Allowed) The multi-axis magnetometer for measuring the magnetic field intensity along three 29.

orthogonal axes of claim 27 wherein the vertical magnetic sensor circuit component is about 1.1 mm

in height above the PCB.

(Allowed) The multi-axis magnetometer for measuring the magnetic field intensity along three 30.

orthogonal axes of claim 26 wherein the vertical magnetic sensor circuit component is less than

about 1.1 mm in height above the PCB.

(Allowed) The multi-axis magnetometer for measuring the magnetic field intensity along three 31.

orthogonal axes of claim 27 wherein the vertical magnetic sensor circuit component is less than

about 1.1 mm in height above the PCB.

32. (Currently amended) A sensor package comprising:

a vertical sensor circuit component comprising a first face, a second face, a bottom a)

edge, a top edge, two side edges, input/output (I/O) pads and at least one sensitive direction

wherein the I/O pads are arranged on the second face of the vertical sensor circuit component; and

b) a horizontal sensor circuit component comprising a top face, a printed circuit board

(PCB) mounting face, a vertical sensor circuit component interface edge, at least two or more other

edges, and at least one sensitive direction orthogonal to the sensitive directions of the vertical

sensor circuit component, wherein the horizontal sensor circuit component is connected to the PCB,

wherein the vertical sensor circuit component interface edge of the horizontal sensor circuit

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component connectively supports the vertical sensor circuit component along the Z axis.

33. (Allowed) The sensor package of claim 32 wherein the vertical sensor circuit component is

non-conductively connected to the horizontal sensor circuit component.

34. (Allowed) The sensor package of claim 33 wherein the non-conductive connection is formed

with an adhesive.

35. (Allowed) The sensor package of claim 34 wherein the adhesive is non-conductive epoxy.

36. (Allowed) The sensor package of claim 32 wherein the vertical sensor circuit component is

conductively connected to the horizontal sensor circuit component.

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